

**T. Y. B. SC. (BIOTECHNOLOGY) SEM – VI (CBCS - 2015  
COURSE) : SUMMER - 2018**

**Subject: Animal Biotechnology**

Day: **Saturday**  
Date: **07/04/2018**

**S-2018-1062**

Time: **10.00 am to 01.00 pm**  
Max. Marks: 60

**N.B.:**

- 1) Q1 and Q5 are compulsory.
- 2) Answer ANY TWO questions from Q 2, 3, 4 in Section I.
- 3) Answer ANY TWO questions from Q 6, 7, 8 in Section II.
- 4) Answers to Both the sections to be written in SEPARATE answer books.
- 5) Draw a labeled diagram WHEREVER necessary.

**SECTION - 01**

Q.1) Answer the following: (ANY FIVE) (2 Marks X 5 = 10)

- a) What is animal biotechnology?
- b) What is crossbreeding?
- c) Write the advantages of embryonic stem cell-mediated gene transfer in transgenesis
- d) Explain parasite vaccines for animals.
- e) State the significance of inverted microscope in ATC.
- f) Why normal diploid cell line is passaged for limited generations?

Q.2) Answer the following: (5 Marks X 2 = 10)

- a) Explain the structure of transgene construct.
- b) Write various advantages and drawbacks of transgenic technology.

Q.3) Explain the following: (5 Marks X 2 = 10)

- a) Explain ethical issues associated with animal cloning.
- b) How sterile conditions in tissue culture laboratory are maintained?

Q.4) Write short notes on the following: (5 Marks X 2 = 10)

- a) DIVA vaccines.
- b) Viable counting

**SECTION - 02**

Q.5) Answer the following: (ANY FIVE) (2 Marks X 5 = 10)

- a) Enlist any two cell lines and specify their applications.
- b) Compare the Earle's and Hank's balanced salt solution formulations.
- c) Why EDTA is used in enzymatic disaggregation of tissue?
- d) What are toxoids?
- e) State the role of sodium bicarbonate in tissue culture medium.
- f) What are the two main types of vaccines? Explain with example.

Q.6) Answer the following: (5 Marks X 2 = 10)

- a) Enlist the applications of monoclonal antibodies?
- b) What is HAT selection? Explain its application in the production of monoclonal antibodies.

Q.7) Explain the following: (5 Marks X 2 = 10)

- a) Design of bioreactor for scale up of cell culture
- b) Childhood immunization schedule in India

Q.8) Write short notes on the following: (5 Marks X 2 = 10)

- a) Stem cells
- b) Somatotropin

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